

## New species of *Ruellia* (Acanthaceae) from French Guiana and adjacent Brazil

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*Abstract.*—Two new species, *Ruellia amapensis* and *R. schnellii*, are described, illustrated and compared with their closest relatives. A key to all the known species of *Ruellia* from the Guianas is also provided.

*Ruellia* L. is the second largest genus of Acanthaceae, with approximately 250 species of perennial herbs and shrubs with pantropical distribution. The genus, named for Jean de la Ruelle (1474–1537), a French physician and herbalist, exhibits large and usually showy flowers borne either singly or in various inflorescence forms, which are either terminal or axillary or both. The infundibular or salverform corollas are either lavender, purple (mauve), nearly black, white, yellow or red with a narrow tube and an often campanulate limb with five more or less spreading lobes. The genus is characterized by the four didynamous stamens each with bilocular anthers, which are usually muticous basally. The capsules are either oblong or clavate, with the dissepiment generally remaining attached to the capsule wall at maturity. Each capsule contains between 4 and 28 plano-compressed, suborbicular seeds. These are provided with a mucilaginous coat that exhibits, upon moistening, tapered, short trichomes with walls marked internally by rings or spirals (Long 1970, Ezcurra 1993, Daniel 1995, Wasshausen 1995). In an attempt to identify recent collections of *Ruellia* from French Guiana and Brazil, I have found two undescribed species of the genus.

### Key to species of *Ruellia* in the Guianas

1. Flowers sessile or short-pedunculate in the axils of the upper leaves . . . . . 2

- 2. Leaves sessile to subsessile, blades linear to narrowly lanceolate, to 1.2 cm wide; corollas 45–50 mm long . . . . .  
. . . . . *R. geminiflora* var. *angustifolia*
- 2. Leaves petiolate, blades elliptic to oblong to narrowly obovate, ovate, ovate-elliptic to ovate-oblong to deltoid, 1.2–6.0 cm wide; corollas 18–40 mm long . . . . . 3
- 3. Corollas blue or blue-violet, pale purple to violet . . . . . 4
- 4. Erect herbs; corollas blue or blue-violet, 18–25 mm long, tube infundibuliform, 14–18 mm long, basal portion cylindrical, 3–4 mm long, similar in length to infundibular upper portion, apically 3.5–4.0 mm wide . . . . . *R. microcalyx*
- 4. Much branched, prostrate to procumbent herbs; corollas pale purple to violet, 25–30 mm long, tube infundibuliform, 7 mm long, basal portion cylindrical, 5 mm long, shorter in length than infundibular upper portion, apically 15 mm wide . . . . . *R. prostrata*
- 3. Corollas brick-red, pale yellow, sulphur-yellow or white with copper-red apex . . . . . 5
- 5. Corolla pale yellow, sulphur-yellow or white with a copper-red apex, 25–32 (38) mm long; distal foliose bracts not conspicuous, imbricate or bicolored, 10–20 by 1–2 mm; calyx segments subulate, 5–6 mm long, puberulous, minutely and densely gland-dotted . . . . .  
. . . . . *R. amapensis*
- 5. Corolla brick red, 35–40 mm long; distal foliose bracts conspicuous, imbricate, bicolored, 22–40 by 8–18 mm; ca-

- lyx segments narrowly triangular, 3 mm long, glabrous and distinctly gland-dotted . . . . . *R. schnellii*
1. Flowers pedunculate borne terminally and/or in the axils on conspicuously long peduncles . . . . . 6
  6. Corollas conspicuously large, curved and ventricose, scarlet or bright red, 60–70 mm long . . . . . *R. inflata*
  6. Corollas not conspicuously large, curved or ventricose, white, white with lavender streaks to lilac or violet, pale mauve or bluish, 30–45 mm long . . . . . 7
  7. Leaf blades linear to narrowly lanceolate or narrowly oblong, 0.8–2.5 cm wide . . . . . *R. longifolia*
  7. Leaf blades ovate to oblong or elliptic, 2.7–5.0 cm wide . . . . . 8
  8. Flowers solitary or rarely in 2's, borne on unbranched peduncles; calyx lobes 4.0 by 0.75 mm . . . . . *R. violacea*
  8. Flowers dense or lax, borne on once or twice dichasially branched peduncles; calyx segments 8.0–14.5 by 0.5–1.0 mm . . . . . 9
  9. Leaf blades ovate to oblong, 3.7–6.0 by 2.7–3.5 cm; lateral cleistogamous flowers commonly present; corolla lobes 16–17 by 13–15 mm; capsule cylindric, 17.0–23.5 by 3.0 mm . . . . . *R. tuberosa*
  9. Leaf blades elliptic, 10–16 by 3–5 cm; cleistogamous flowers (lateral) not known; corolla lobes 7–8 by 5.5–8.0 mm; capsule narrowly ovate, 11–15 by 3–4 mm . . . . . 10
  10. Herbs 40–75 cm tall; leaf blades glabrous or sparingly hirsute with green undersides; calyx segments 8–9 by 0.5–1.0 mm, sparingly glandular-pubescent; trichomes not yellowish; corolla white with lavender streaks to lilac or violet, pale mauve or bluish . . . . . *R. rubra*
  10. Shrubs 1 m tall; leaf blades with lower surface densely pilose and purplish; calyx segments 10–14 by 0.5 mm, conspicuously glandular pilose with yellowish trichomes; corolla entirely white . . . . . *R. saülensis*

pilosis; foliorum lamina elliptica vel anguste obovata, glabra, acuminata, basi attenuata in petiolum decurrenti; petiolo pilosulo; inflorescentiae ex spicis terminalibus vel thyrsus dichasio sessiles vel brevi-pedunculati, bracteis foliaceis subulatis vel parce oblongis; bracteolis anguste triangularibus; flos calycis segmentis subulatis, puberulis et glanduloso-punctatis; corolla luteola vel sulphurea, tubo leviter curvato, limbo suberecto; staminibus leviter exsertis; capsulae clavatae, puberulae, apice apiculatae.

Herb or shrubby herb (0.30) 0.75–1.0 m tall, branched from a subligneous base; stem erect, quadrangular, branching, younger stems subquadrangular, sparsely pilosulous, older stems quadrangular, glabrate, inconspicuously lenticellate; leaf blades elliptic to narrowly obovate, 10–20 by 4–6 cm, firm, glabrous or nearly so above and below, long-acuminate apically, base attenuate and partially decurrent on the petiole, midvein sulcate above, convex below, lateral veins ca. 6 pairs, convex on both surfaces, the margins distinctly crenulate to crenate; petiole 20–40 mm long, moderately pilosulous; leaves subtending inflorescence reduced, much narrower than cauline leaves; inflorescence a terminal spike to thyrses of sessile to short-pedunculate dichasia from the axils of distal foliose bracts, dichasia opposite, 1–3-flowered, peduncles (if present) to 1.5 mm long; bracts foliose, subulate to narrowly oblong, narrowed at both ends, 10–20 mm long and 1–2 mm wide; bracteoles narrowly triangular, 2–3 mm long, 1 mm wide at base, puberulous and minutely gland-dotted; calyx 5–7 mm long, the segments subulate, 5–6 mm long, 0.75–1.0 mm wide at base, puberulous and minutely and densely gland-dotted; corolla pale yellow, sulphur-yellow or white with copper-red apex, infundibular, 25–32 (38) mm long, glabrous except the tube minutely puberulous, the tube cylindrical, slightly bent near the base, 12–15 mm long, the limb suberect, the lobes obovate, 8–9 by 6–8 mm, retuse apically; stamens slightly exserted from the mouth of the corolla; an-

*Ruellia amapensis* Wasshausen, sp. nov.

Fig. 1, A–D

Herba vel suffrutex, ad basim sublignosa, caulibus erectis subquadrangularis, parce



Fig. 1. A–D, *Ruellia amapensis* (Cowan 38235); E–H, *Ruellia schnellii* (Schnell 11566). A, Habit; B, Bracteoles and calyx segments; C, Corolla and calyx; D, Calyx and pistil; E, Habit; F, Calyx segments; G, Enlargement of calyx indumentum; H, Corolla, calyx, stamens and stigma.



thers 3 mm long; ovary and style puberulent; capsule clavate, 15 by 4 by 3 mm, minutely puberulent, green at base, apiculate and tinged purplish-brown apically, the stipe 7 mm long; seeds dark brown, 2.75 mm in diam., glabrous, margins ringed with hygroscopic trichomes.

*Type*.—BRAZIL: Amapá: Serra do Navio, Rio Amapari, main road from Igarape Cancão Dam Site toward Camp ca. 2 km, 70–300 m, 11 Nov 1954, *R. S. Cowan* 38235 (holotype US!; isotype NY!).

*Additional specimens*.—FRENCH GUIANA: Sommet tabulaire, zone central, 40 km SE of Saül, 550 m, 28 Sep 1980, *de Granville* 3644 (P, US); April 1961, *Aubréville* 150 (P). BRAZIL: Amapá: Serra do Navio, Rio Amapari, forest near dam in Igarape behind Chumbo Ore Body, ca. 125 m, 1 Nov 1954, *R. S. Cowan & Maguire* 38054 (NY); Rio Araguari, Serra do Navio, 4 km N of ICOMI dining and recreation area, 4 Aug 1961, *J. M. Pires et al.* 50309 (NY, US).

Locally frequent in moist heavily forested hills and in dense vegetation on marshy soil along creek margins at elevations between 70 and 550 meters; flowering and fruiting in April, August, September and November.

*Ruellia amapensis* resembles *R. cearensis* Lindau by its general habit and inflorescence but may be distinguished from the latter by having an inflorescence of a terminal spike to thyse of sessile to short-pedunculate dichasia; the corolla pale yellow, sulphur-yellow or white with copper-red apex, 25–32 (38) mm long, infundibular; and the calyx lobes not red, subulate, 5–6 mm long, puberulous and minutely and densely gland-dotted. In contrast, *R. cearensis* has an inflorescence of spike-like panicles with cymose flowers; the corolla purple or pink, not infundibuliform; and the calyx lobes are red, linear, 11 mm long and glandular puberulent.

*Ruellia schnellii* Wasshausen, sp. nov.

Fig. 1, E–H

Herba reptans, ad basim sublignosa, caulibus erectis ramosis, subquadrangularis,

glabris; foliorum lamina anguste elliptica vel oblonga, glabra, brevi-acuminata, basi longi-attenuata in petiolum decurrenti, petiolo puberulo; inflorescentiae ex spicis terminali 2–3 floro bracteis foliaceis subtento constans; bracteolis foliaceis bicoloris, ellipticis vel anguste ovatis; flos calycis segmentis anguste triangularis, glabris et glanduloso-punctatis; corolla lateritia, glabra, hypocrateriformis, tubo curvato et ventricosos, lobis ovalis vel suborbicularis, patulis; staminibus leviter exsertis; capsulae clavatae, glabrae, apice apiculatae.

Creeping herb 50 cm tall, branched from a subligneous base; stem erect, terete, branching, younger stems subquadrangular, glabrate and gland-dotted, older stems terete, longitudinally rugulose, glabrate; leaf blades narrowly elliptic to oblong, 9–12 by 2.5–4.0 cm, thin, glabrous or nearly so above and below, short-acuminate apically, base long-attenuate and partially decurrent on the petiole, midvein sulcate above, convex below, lateral veins 8–10 pairs, convex on both surfaces, the margins entire or faintly and irregularly crenulate; petiole 5–15 mm long, canaliculate, puberulous; inflorescence a terminal spike to raceme of sessile to short-pedunculate flowers from the axils of showy, distal foliose bracts, spikes to racemes 5–10 cm long, flowers opposite, solitary, often crowded near shoot apex and collectively appearing subcapitate, peduncles (if present) to 8 mm long; foliose bracts bicolored, elliptic to narrowly ovate, 22–40 by 8–18 mm, glabrous, gland-dotted, acute to acuminate at apex, attenuate at base; calyx 4–5 mm long, glabrous and gland-dotted, the segments narrowly triangular, 3 mm long, 0.8–1.0 mm wide, glabrous and gland-dotted; corolla brick-red, glabrous, 35–40 mm long, the tube infundibular, curved, 0.6–0.8 mm broad at throat, the limb about 2.0–2.2 cm broad, the lobes oval to suborbicular, 1 cm long or more, spreading, retuse apically; stamens slightly exserted from the mouth of the corolla tube; anthers 3–4 mm long; ovary and style puberulous; capsule clavate, 12–14 by 6 by

3.0–3.5 mm, drying brownish, glabrous, nitid, apiculate apically, the stipe 3–4 mm long, the retinacula curved, slender, 4 mm long; seeds dark brown, flat, orbicular, 4.0 by 3.5 mm, 1 mm thick, appressed pilose when dry, mucilaginous-pilose when moistened.

*Type*.—FRENCH GUIANA: Between Maripasoula and Wakapore, 30 Aug 1961, Schnell 11566 (holotype P!).

*Additional specimens*.—FRENCH GUIANA: Maroni, Maripasoula, Jul 1969, Petitbon 179 (P); Région de Paul Isnard, road to Citron, 8 Nov 1982, Feuillet 298 (P, US); St. Jean, 26–28 Apr 1914, Benoist 1167 (P, US).

Occasional, along edges or clearings of dense forests in French Guiana; flowering and fruiting April through November.

*Ruellia schnellii* resembles *R. tubiflora* H.B.K. var. *tubiflora* and *R. tubiflora* H.B.K. var. *tetrastichantha* (Lindau) Leonard from Costa Rica, Panama, Venezuela and Colombia by its general habit and inflorescence but may be distinguished from the latter by having narrowly elliptic to oblong, 9–12 by

2.5–4.0 cm leaf blades, a smaller corolla, 0.6–0.8 mm broad at throat and the limb about 20–22 mm broad, and the distinctly bicolored foliose bracts subtending the short terminal spike. In contrast, *R. tubiflora* has oblong-elliptic, 6–24 by 6–9 cm leaf blades, a distinctly larger corolla, 10–15 mm broad at throat and the limb about 30 mm broad, and leafy, not bicolored foliose bracts subtending the short terminal spike.

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